

App. No. 10/712,367

Response to 11/23/05 Office Action

Amendments to the Claims:

1 to 29. (canceled).

30. (previously presented) A polishing article having a polishing surface for chemical-mechanical polishing a workpiece, the polishing article comprising:

a mixture, substantially uniform throughout said polishing article, of a friable filler material having a hardness that is less than 3 on the Mohs hardness scale, an abrasive, and a binder, the binder being a product of a reaction between a heat curable resin having at least one epoxy group and an epoxy curing agent,

wherein said polishing article is constructed with said resin included at a concentration that is between about 5% and about 15% by weight of said filler material to thereby cause said polishing surface to continually wear during polishing and thereby facilitate continuous exposure of the abrasive.

31 to 34. (canceled).

35. (previously presented) The polishing article according to claim 30, wherein said epoxy curing agent is included at a concentration that is between about 10% and about 30% by weight of the resin material.

36. (canceled).

37. (previously presented) The polishing article according to claim 30, wherein the filler material is selected from the group consisting of talc, gypsum, and calcite.

38. (previously presented) The polishing article according to claim 30, wherein said polishing article has a thickness ranging between about 1 cm and about 3 cm.

39. (previously presented) The polishing article according to claim 38, wherein said polishing article has a thickness greater than about 2 cm.

40. (previously presented) The polishing article according to claim 30, wherein a weight ratio of abrasive to filler material is between about 0.3 and about 0.7.

41. (previously presented) The polishing article according to claim 30, further comprising at least one optically transparent window adapted to allow for transmission of light through said polishing article.

42. (previously presented) The polishing article according to claim 30, further comprising a plurality of grooves created in said polishing surface for transporting fluids over said polishing surface.

43. (previously presented) A method for chemical mechanical planarization of a workpiece surface using a polishing apparatus comprising a platen and a fixed abrasive polishing article mounted on said platen, the method comprising the steps of:

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polishing said workpiece surface using said fixed abrasive polishing article, said polishing article having a polishing surface, and comprising a substantially uniform mixture of a friable filler material having a hardness that is less than 3 on the Mohs hardness scale, an abrasive, and a binder, the binder being a product of a reaction between a heat curable resin having at least one epoxy group, and an epoxy curing agent, the heat curable resin being at a concentration that is between about 5% and about 15% by weight of said filler material; and

wearing away said polishing surface during said polishing step, and thereby continuously exposing said abrasive at said polishing surface.

44 to 47. (canceled).

48. (previously presented) The method according to claim 43, wherein said epoxy curing agent is included at a concentration that is between about 10% and about 30% by weight of the resin material.

49. (canceled).

50. (currently amended) The method according to claim ~~[[49]]~~ 43, wherein the filler material is selected from the group consisting of talc, gypsum, and calcite.

51. (previously presented) The method according to claim 43, wherein said polishing article has a thickness ranging between about 1 cm and about 3 cm.

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52. (previously presented) The method according to claim 51, wherein said polishing article has a thickness greater than about 2 cm.

53. (previously presented) The method according to claim 43, wherein a weight ratio of abrasive to filler material is between about 0.3 and about 0.7.